4-21-21E

Roselle RY-41

July 26, 1950

Deep Rock Oil Corporation
Atlas Life Building
Tulsa, Oklahoma

Attention: Mr. T. F. Lowry

Gentlemen:

Enclosed herewith is the report of the partial analysis made on the Keystone barrel core taken from the Roselle Lease, Well No. RY-41, Anderson County, Kansas, and submitted to our laboratory on July 21, 1950.

In calculating the recovery for the sand within the vicinity of this well, an allowance was made for oil lost during coring, and it was assumed that the true water saturation of the sand is 36.0 percent, and that the well is not pressured up. The reason why the calculated recovery is much lower than the flood pot recovery is due to the fact that there is a wide variation in the effective permeability of the sand.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:dt
c.c. to Mr. Neil Henderson
Mr. Jack McQueeney

DEEP ROCK OIL CORPORATION

CORE ANALYSIS REPORT

ROSELLE LEASE WELL NO. RY-41

ANDERSON COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

JULY 29, 1950

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Deep Rock Oil Corporation Lease Roselle Well No. RY-61

Location 627 feet north of south line, 1310 feet west of east line, SW¼, NW

Section 4 Twp. 21 Rge. 21 County Anderson State Kansas

Name of Sand	Squirrel
Top of Core	649.00
Bottom of Core	688.60
Top of Pay Sand	667.00
Bottom of Pay Sand	687.36
Total Feet of Permeable Sand Analyzed	15.83

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.

Effective Average Permeability, Millidarcys	2.21
Average Percent Porosity	18.11
Average Percent Oil Saturation	38.52
Average Percent Water Saturation	-
Average Oil Content, Bbls./A. Ft.	551.
Total Oil Content, Bbls./Acre	11,179.
Average Percent Oil Recovery by Laboratory Flooding Tests	16.34
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	240.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	3,792.
Total Calculated Oil Recovery, Bbls./Acre	2,650.
Packer Setting, Feet	655.5
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	

Note: The above averages are for that part of the sand section extending from the packer setting to the top of cement plug.

OIL FIELD RESEARCH LABORATORIES

LOG

Company Deep Rock Oil Corporation Lease Rosella Well No. RY-41

Depth Interval, Feet	Description
649.00 - 649.30	Gray shale.
649.30 - 649.80	Gray sandy shale.
649.80 - 650.10	Finely laminated shale and sandstone.
650.10 - 652.00	Gray shale.
652.00 - 652.30	Light brown fine grained finely laminated micaceous shaley sandstone.
652.30 - 652.60	Light brown fine grained laminated micaceous shaley sandstone.
652.60 - 652.75	Finely laminated shaley sandstone.
652.75 - 652.85	Gray shale.
652.85 - 653.18	Brown fine grained micaceous sandstone.
653.18 - 653.85	Finely laminated sandy shale.
653.85 - 655.05	Gray shale.
655.05 - 655.80	Brown fine grained micaceous shaley sandstone.
655.80 - 655.78	Laminated sandstone and shale.
655.78 - 656.10	Laminated shaley sandstone.
656.10 - 656.40	Gray sandy shale.
656.40 - 656.70	Finely laminated shaley sandstone.
656.70 - 656.90	Brown fine grained micaceous sandstone.
656.90 - 657.00	Gray shale.
657.00 - 657.90	Brown fine grained micaceous sandstone.
657.90 - 658.38	Finely laminated sandy shale.
658.38 - 658.55	Light brown fine grained micaceous shaley sandstone.
658.55 - 660.03	Finely laminated sandy shale.

660.03 - 660.15 - Finely laminated shaley sandstone.

660.15 - 660.30 - Gray shale.

660.30 - 660.60 - Finely laminated shaley sandstone.

660.60 - 661.00 - Gray sandy shale.

661.00 - 661.30 - Brown fine grained micaceous sandstone.

661.30 - 661.50 - Gray sandy shale.

661.50 - 661.92 - Brown fine grained micaceous sandstone.

661.92 - 662.20 - Gray sandy shale.

662.20 - 662.92 - Brown fine grained slightly laminated micaceous shaley sandstone.

662.92 - 663.03 - Grey shale.

663.03 - 663.30 - Finely laminated sandstone and shale.

663.30 - 663.45 - Finely laminated shaley sandstone.

663.45 - 663.75 - Brown fine grained micaceous sandstone.

663.75 - 663.85 - Gray shale.

663.85 - 664.05 - Brown fine grained micaceous shaley sandstone.

664.05 - 664.35 - Gray shale.

664.35 - 665.28 - Brown fine grained micaceous sandstone.

665.28 - 666.00 - Gray shale.

666.00 - 667.37 - Brown fine grained micaceous sandstone.

667.37 - 667.47 - Gray shale.

667.47 - 668.40 - Brown fine grained micaceous sandstone.

668.40 - 668.60 - Gray sandy shale.

668.60 - 669.15 - Brown fine grained micaceous sandstone.

669.15 - 669.60 - Brown fine grained slightly laminated micaceous shaley sandstone.

669.60 - 671.20 - Brown fine grained laminated micaceous shaley sandstone.

671.20 - 671.85 - Brown fine grained micaceous sandstone.

671.85 - 672.30 - Brown fine grained laminated micaceous shaley sandstone.

672.30 - 672.72 - Brown fine grained micaceous sandstone.

672.72 - 673.30 - Gray shale.

673.30 - 673.68 - Laminated sandstone and shale.

673.68 - 673.85 - Brown fine grained laminated micaceous shaley sandstone.

673.85 - 674.63 - Gray shale.

674.63 - 675.55 - Brown fine grained laminated micaceous shaley sandstone.

675.55 - 675.65 - Laminated sandstone and shale.

675.65 - 676.20 - Brown fine grained micaceous sandstone.

676.20 - 677.60 - Laminated sandstone and shale.

677.60 - 678.00 - Gray shale.

678.00 - 679.20 - Brown fine grained micaceous sandstone.

679.20 - 679.60 - Laminated sandstone and shale.

679.60 - 680.00 - Brown fine grained laminated micaceous shaley sandstone.

680.00 - 681.45 - Dark brown fine grained micaceous sandstone.

681.45 - 682.20 - Brown fine grained laminated micaceous shaley sandstone.

682.20 - 682.47 - Dark brown fine grained micaceous sandstone.

682.47 - 682.75 - Finely laminated sandy shale.

682.75 - 683.05 - Brown fine grained laminated micaceous shaley slightly carbonaceous sandstone.

683.05 - 683.80 - Brown fine grained micaceous sandstone.

683.80 - 684.00 - Gray sandy shale.

684.00 - 685.70 - Brown fine grained micaceous sandstone.

685.70 - 685.90 - Finely laminated shaley sandstone.

685.90 - 686.42 - Brown fine grained laminated micaceous shaley sandstone.

686.42 - 687.36 - Dark brown fine grained micaceous sandstone.

687.36 - 687.63 - Light brown fine grained micaceous calcareous conglomeratic sandstone.

687.63 - 687.90 - Gray shale.

687.90 - 688.60 - Black shale (according to their log).

Oil Field Research Laboratories

SHOT RECOMMENDATION

Company Deep Rock Oil Corporation Lease Roselle Well No. HY-41

Depth Interval, Feet	Feet of Sand	Size of Shell Inches	Qts./Ft.	Total Quarts
660.5 - 686.0	25.5	2½	2.0	51.0

Recommended Packer Setting - 655.5 feet
Note: Plug hole back to ---- 667.5 feet

Oil Field Research Laboratories

RESULTS OF SATURATION TESTS

TABLE III

Company Deep Rock Oil Corporation Lease Rosella Well No. RY-41

Sat. No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbls./A. Ft.	Feet of Core		Total Oil Content Bbls./Acre
			Oil	Water	Total		Ft.	Cum. Ft.	
1	649.95	13.9	20.8	-	-	224	0.30	0.30	67
2	652.45	15.1	18.2	-	-	214	0.30	0.60	64
4	655.40	14.9	25.0	-	-	289	0.58	1.18	168
5	656.53	15.3	23.9	-	-	284	0.30	1.48	85
6	657.14	19.5	41.7	-	-	631	0.40	1.88	252
7	657.75	18.4	45.9	-	-	656	0.50	2.38	328
9	660.45	14.8	24.9	-	-	286	0.30	2.68	86
10	661.63	18.3	47.1	-	-	684	0.42	3.10	288
11	662.43	19.4	28.5	-	-	428	0.72	3.82	308
12	663.60	21.6	36.4	-	-	617	0.30	4.12	185
13	664.77	17.4	44.4	-	-	609	0.93	5.05	567
14	666.16	20.9	37.1	-	-	602	0.50	5.55	301
15	666.87	18.5	44.7	-	-	642	0.87	6.42	558
16	667.65	17.5	41.1	-	-	558	0.93	7.33	518
17	668.75	18.3	43.4	-	-	617	0.55	7.90	340
18	670.15	16.2	23.7	-	-	298	1.45	9.35	432
19	670.94	16.9	38.9	-	-	510	0.60	9.95	306
20	671.62	18.2	44.9	-	-	633	1.10	11.05	696
21	673.43	15.5	18.5	-	-	222	0.38	11.43	84

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Oil Field Research Laboratories

RESULTS OF SATURATION TESTS

TABLE III

Company Deep Rock Oil Corporation Lease Hesalle Well No. RY-41

Sat. No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbls./A. Ft.	Feet of Core		Total Oil Content Bbls./Acre
			Oil	Water	Total		Ft.	Cum. Ft.	
22	675.24	18.0	42.1	-	-	588	0.92	12.35	542
23	676.04	20.6	39.9	-	-	637	0.55	12.90	350
25	678.45	18.4	42.1	-	-	600	1.20	14.10	720
26	679.80	17.5	37.3	-	-	507	0.40	14.50	203
27	680.70	19.0	35.2	-	-	519	1.45	15.95	753
28	682.03	15.9	34.6	-	-	427	1.02	16.97	435
29	683.45	20.3	33.6	-	-	530	1.05	18.02	556
30	684.43	20.2	46.6	-	-	731	0.70	18.72	512
31	685.03	20.8	53.0	-	-	856	0.50	19.22	428
32	685.36	20.3	47.3	-	-	746	0.50	19.72	373
33	686.13	16.6	42.0	-	-	541	0.52	20.24	281
34	686.84	19.0	44.1	-	-	650	0.94	21.18	611
							Total	- - - -	11,397

Oil Field Research Laboratories

SUMMARY OF SATURATION TESTS

TABLE IV

Company Deep Rock Oil Corporation Lease Roselle Well No. RY-41

Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbls./A. Ft.	Total Oil Content Bbls./Acre
649.80-673.68	11.43	17.51	35.60	-	493	5,633
674.63-687.36	9.75	18.61	40.36	-	591	5,764
655.50-687.36	20.26	18.11	38.52	-	551	11,179

Oil Field Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company Deep Rock Oil Corporation Lease Roselle Well No. RY-41

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation			Volume of Water Recovered cc*	[redacted] Effective Permeability, Millidarcys **	Initial Fluid Production Pressure Lbs./Sq. In.
			Percent	Bbls./A. Ft.	Percent	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.			
1	649.95	13.9	20.8	224	0.0	0	20.8	78.8	224	0	Imp.	50 +
2	652.45	15.1	18.2	214	0.0	0	18.2	73.3	214	0	Imp.	50 +
4	655.40	14.9	25.0	289	0.0	0	25.0	74.4	289	0	Imp.	50 +
5	656.53	15.3	23.9	284	0.0	0	23.9	72.8	284	0	Imp.	50 +
6	657.14	19.5	41.7	631	13.6	206	28.1	71.1	425	39	3.66	15
7	657.75	18.4	45.9	656	20.4	292	25.5	73.3	364	47	2.15	10
9	660.45	14.8	24.9	286	0.0	0	24.9	71.8	286	0	Imp.	50 +
10	661.63	18.3	47.1	684	24.6	350	23.5	74.8	334	14	0.665	25
11	662.43	19.4	28.5	428	0.0	0	28.5	71.1	428	0	Imp.	50 +
12	663.60	21.6	36.4	617	11.2	190	25.2	70.7	427	88.5	4.58	15
13	664.77	17.4	44.4	609	21.8	294	22.6	75.5	305	21	0.885	15
14	636.16	20.9	37.1	602	12.9	210	24.2	74.5	392	88	3.97	15
15	666.87	18.5	44.7	642	20.2	290	24.5	74.0	352	22	0.677	25
16	667.65	17.5	41.1	556	19.5	265	21.6	76.0	293	4	0.206	25
17	668.75	18.3	43.4	617	21.1	300	22.3	75.0	317	155	6.02	10
18	670.15	16.2	23.7	298	0.0	0	23.7	74.7	298	0	Imp.	50 +
19	670.94	16.9	38.9	510	8.8	115	30.1	65.6	395	0	0.024	35
20	671.62	18.2	44.9	633	7.7	109	37.2	57.2	524	3	0.094	15
21	673.43	15.5	18.5	222	0.0	0	18.5	75.0	222	0	Imp.	50 +
22	675.24	18.0	42.1	588	17.9	250	24.2	74.4	338	13	0.738	20
23	676.04	20.6	39.9	637	14.4	230	25.5	73.5	407	59	1.56	15
25	678.45	18.4	42.1	600	12.7	181	29.4	65.8	419	104.5	2.85	10
26	679.80	17.5	37.3	507	4.9	67	32.4	66.7	440	10	0.510	30
27	680.70	19.0	35.2	519	13.8	204	21.4	71.4	315	45	1.57	20
28	682.03	15.9	34.6	427	0.0	0	34.6	60.9	427	0	Imp.	50 +
29	683.45	20.3	33.6	530	12.3	194	21.3	74.6	336	106	6.63	15
30	684.43	20.2	46.6	731	24.2	380	22.4	72.0	351	171	7.13	10
31	685.03	20.8	53.0	856	32.3	522	20.7	76.8	334	135	6.17	10
32	685.36	20.3	47.3	746	22.2	350	25.1	64.4	396	26	0.906	15
33	686.13	16.6	42.0	541	9.1	117	32.9	65.8	424	22	0.983	25
34	686.84	19.0	44.1	650	19.2	283	24.9	63.6	367	12	0.400	25

Notes: cc - cubic centimeter
*Volume of water recovered at the time of maximum oil recovery.
**Determined by passing water through sample which still contains residual oil.

Oil Field Research Laboratories

SUMMARY OF LABORATORY FLOODING TESTS

TABLE VI

Company Deep Rock Oil Corporation Lease Roselle Well No. Ry-41

Depth Interval, Feet	657.00 - 672.30	674.63 - 687.36	657.00 - 687.36
Feet of Core Analyzed	7.10	8.73	15.83
Average Percent Porosity	18.37	18.92	18.67
Average Percent Original Oil Saturation	42.86	41.07	41.87
Average Percent Oil Recovery	16.49	16.21	16.34
Average Percent Residual Oil Saturation	26.37	24.86	25.53
Average Percent Residual Water Saturation	71.63	69.76	70.60
Average Percent Total Residual Fluid Saturation	98.00	94.62	96.13
Average Original Oil Content, Bbls./A. Ft.	609.	611.	610.
Average Oil Recovery, Bbls./A. Ft.	234.	244.	240.
Average Residual Oil Content, Bbls./A. Ft.	375.	367.	370.
Total Original Oil Content, Bbls./Acre	4,326.	5,330.	9,658.
Total Oil Recovery, Bbls./Acre	1,663.	2,129.	3,792.
Total Residual Oil Content, Bbls./Acre	2,665.	3,201.	5,866.
Average Effective Permeability, Millidarcys	1.58	2.73	2.21
Average Initial Fluid Production Pressure, p.s.i.	16.4	17.7	18.0

Note: Only those samples which recovered oil were used in calculating the above averages.